Cost-Effectiveness/Cost-Benefit Analyses CEB (Session 2)

CEB5

MEASURING PATIENT PREFERENCES USING CONJOINT ANALYSIS: A NEW APPROACH

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Conjoint analysis (CA) is one approach to measuring preferences ("utilities") that estimates both overall preferences for goods or services as well as preferences for their specific attributes. This method, derived from economic theory, has been widely used in many fields, as it can provide a more flexible format for preference measurement than contingent valuation or QALYs. However, CA has not been as widely used in health care. An unresolved issue is whether CA surveys can be made easier for respondents, thereby increasing their reliability and validity. **OBJECTIVE:** We conducted an experiment to assess whether surveys designed to be easier for respondents would have greater reliability and validity than surveys developed using the standard CA approach where all levels of attributes are allowed to vary. **METHODS:** We surveyed 300 respondents being tested for HIV. Respondents were asked nine questions about whether they would choose "Test A or B" based on six attributes (location, cost, ease of collection, timeliness and accuracy, confidentiality, counseling). We also asked one repeated question and one dominated question (i.e., where respondents should choose the obvious choice). In the standard survey, levels of all six attributes were allowed to vary. In the easier version, levels of two attributes stayed constant. **RESULTS:** Based on preliminary data, we found a trend towards the easier survey having greater reliability and validity, as well as lower subjective difficulty ratings. Further analyses will examine the tradeoffs between the decreased cognitive complexity of the easier survey with the statistical efficiency lost by forcing attributes to remain constant. **CONCLUSION:** CA can provide useful information on preferences for attributes of goods and services, including pharmaceuticals. By simplifying the method used to obtain preferences, it may be possible to obtain more reliable and valid responses without sacrificing statistical efficiency.

CEB6

THE IMPORTANCE OF COMPARABLE PATIENT POPULATIONS IN COST-EFFECTIVENESS ANALYSES: TOLTERODINE VERSUS OXYBUTININ XL FOR TREATING OVERACTIVE BLADDER

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OBJECTIVES: This study identifies and corrects the bias in previous reports comparing tolterodine and oxybutinin XL. By adjusting for different patient populations used, the current study provides updated results. **METHODS:** Using recent clinical trials, correction factors were calculated to remove bias from previous efficacy estimates. That bias resulted from failure to reconcile differences in the separate studies for the two drugs. Oxybutinin XL trials included known responders, all with urinary incontinence (UI), whereas tolterodine trials examined both naïve and previously treated patients with overactive bladder (OAB), some without UI. Therefore, measures of incontinence from the oxybutinin XL trials were adjusted to levels appropriate for a naïve and previously treated OAB population. To assess and correct the effect of the bias, cost-effectiveness results were recalculated based on corrected efficacy. The pharmacoeconomic model from the previous analysis was not described in sufficient detail to be used. Instead, it was simplified to generate revised cost-effectiveness measures using resource and cost data from the previous analysis. **RESULTS:** When adjusted, complete continence was 22.9% for oxybutinin XL and 24.6% for tolterodine. The simplified model then estimated 6-month treatment costs to be $1684 for oxybutinin XL and $1661 for tolterodine. Estimated costs per continent day were $45 and $42 respectively. **CONCLUSIONS:** Cost-effectiveness analysis can be misleading unless biases are explicitly identified and corrected. After adjusting for limitations in the methodology previously used, no significant differences in cost-effectiveness remain between oxybutinin XL and tolterodine. The corrected results are consistent with findings from trials directly comparing oxybutinin XL and tolterodine, which also found no efficacy differences.

CEB7

SOCIOECONOMIC EFFICIENCY OF THE ADJUVANT TREATMENT WITH ACAMPROSATE IN MAINTAINING ABSTINENCE IN ALCOHOL DEPENDENT PATIENTS

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OBJECTIVE: In a cost-effectiveness analysis we compared the socioeconomic relevance of adjuvant treatment of alcoholic patients with acamprosate with different other possible treatments but acamprosate. The main objective was to reveal whether this adjuvant treatment is more cost-effective compared to the control group considering direct and indirect costs. Further objectives were to compare the abstinence rate one year after the onset of the study, the duration of abstinence until the next relapse and the number of abstinent days during the observational period. **METHODS:** In a prospective multicenter cohort study we observed 1200 alcohol dependent patients over a period of 12 months per patient, 800 patients in the acamprosate cohort, 400 in the control group. **RESULTS:** At the end of the study data for 766 patients could be con-

sidered in the statistical analysis (510 from the acamprosate cohort, 256 from the control group). The two groups of the study population were comparable in terms of sociodemographic variables. The number of abstinent patients treated with acamprosate was 41.2% (per protocol analysis), only 25.4% (per protocol analysis) of all patients in the control group were abstinent during the study period. Although the drug costs are three times higher in the acamprosate cohort the cost analysis resulted in total costs of DM 3,026 ($1593) per patient/year for the acamprosate group compared to DM 4,199 ($2210) per patient/year in the control group, a significant cost saving potential of DM 1,173 ($617). Hospitalization could be identified as the most cost-driving factor, and was significantly higher in the control group. **CONCLUSION:** Based on the results of this study, it is suggested that an initial expensive adjuvant treatment of alcoholism leads to less cost than any other single therapy.

CEB8

A DECISION ANALYTIC MODEL MEASURING THE COST-EFFECTIVENESS OF HIGHLY ACTIVE ANTIRETROVIRAL THERAPY (HAART) IN HIV+ PATIENTS WITH HIGH VERSUS LOW BASELINE VIRAL LOAD: AN INDINAVIR PLUS LAMIVUDINE AND ZIDOVUDINE EXAMPLE

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OBJECTIVES: To quantify the cost-effectiveness of indinavir with zidovudine (ZDV) and lamivudine (3TC) compared to ZDV+3TC in patients with high and low baseline viral load as cost per life-year gained (LYG) from a third party payer perspective. **METHODS:** Progression of HIV through 3 stages (CD4+ 200–500, CD4+ <200 No AIDS, AIDS) until death was modeled using a Markov cycle tree, based on CD4+ and viral load factors. Patients who failed to respond or progressed began salvage therapy. Mortality, tolerability and disease progression rates were obtained from published sources. Sixteen week clinical outcomes according to baseline viral load (≤100,000 c/ml; >100,000 c/ml) were determined from a randomized controlled trial (AVANTI II). Drugs and medical care costs disaggregated by CD4 strata were obtained from a Canadian HIV costing study. Future costs and outcomes were discounted at 5%. **RESULTS:** The incremental cost (1997 CDN $) per LYG with IDV/ZDV/3TC vs. ZDV/3TC in patients with baseline viral load below 100,000 c/ml was $68,353 per LYG. Indinavir/ZDV/3TC is more cost-effective in patients with high baseline viral load (>100,000 c/ml) at $24,852 per LYG. The model was robust to probabilities and costs tested in the sensitivity analysis. **CONCLUSIONS:** These figures indicate that HAART therapies, such as indinavir/ZDV/3TC provide important improvements at a reasonable cost and thus are attractive both clinically and economically, especially in patients with high baseline viral load. Factors such as resistance and adherence to therapy need to be considered in future models.

CONTRIBUTED POSTER PRESENTATIONS

Session I

Cardiovascular Disease Research PCD

PCD1

INCORPORATING BOTH DIASTOLIC AND SYSTOLIC PRESSURES IN A MODEL OF THE BENEFITS OF ACHIEVING HYPERTENSION TREATMENT TARGETS

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Models of the clinical and economic impact of hypertension and the benefits of blood pressure (BP) control typically focus on either diastolic or systolic blood pressure (DBP or SBP) but not both. For example, our previously-reported Hypertension Burden of Illness Model considered only DBP and therefore could not address the issue of systolic hypertension. **OBJECTIVE:** To estimate the clinical and economic benefits of achieving both DBP and SBP goals in treated hypertensives. **METHODS:** We revised and updated our existing model which was designed to forecast cardiovascular disease (CVD) incidence and direct medical-care costs for specified populations, such as the membership of a managed-care plan, and simulates the effect of programs to improve BP control. The underlying Framingham Heart Study (FHS) risk equations, which previously quantified the relationship between DBP and CVD risk, were replaced with new FHS equations that incorporated both DBP and SBP. The economic costs of CVD were estimated as in the earlier version using major national health surveys and healthcare cost databases. **RESULTS:** We estimate that 9.6 million persons aged 40–79 years in the US are treated for hypertension but continue to have uncontrolled DBP (≥90 mmHg) or SBP (≥140 mmHg). If all of these patients were treated to high-normal BP (<140/90), an estimated 414,000 CVD events would be prevented over 10 years resulting in medical care cost savings of $6.5 billion, an average of 43 events and $674,000 per 1000 patients. If such treatment were limited to patients with a history of CVD, it would prevent an estimated 59 events and save $761,000 per 1000 patients. **CONCLUSION:**